

REMARKS

This is a response to the Office Action dated July 8, 2005. In the Office Action, Claims 1-12 were rejected under 35 U.S.C. §102(b) as being anticipated by Harada et al. (U.S. Patent No. 5,228,498).

In response, Applicant has amended Claim 1 to further distinguish the invention recited in Claim 1 from the disclosure of Harada et al. In particular, Claim 1 has been amended to further recite first and second pivoting arms which are operative to traverse respective said tundish and said under-tundish from preheating stations to a casting station.

Applicant respectfully submits that Harada et al. does not disclose such limitation. At most, Harada et al. discloses a turret with a pivoting arm wherein the pivoting arm of the turret moves the ladle and does not move the tundish or the undertundish. In support thereof, Applicant respectfully directs the Examiner's attention to col. 6, lns. 58-64 of Harada et al which recites that "the ladle exchanging apparatus ... includes at least two arms 15 mounted for turning motion independently of each other. A ladle 2 is removably held on each of the arms 15 as in a conventionally known ladle exchanging apparatus."

The tundish and the under tundish are moved with a traveling truck which travels on rails of a track. In support thereof, Applicant respectfully directs the Examiner's attention to col. 7, lns. 36-40 which recite that "the traveling truck 5 can removably receive thereon the molten metal pouring tundish 6 (FIG. 1) and is driven to travel on the rails 8 by a drive motor (not shown) connected to front wheels 316 of the traveling truck." Moreover, col. 9, lns. 19-28 recites that the "traveling truck 5 is includes ... a tundish receiving apparatus 34."

For the foregoing reasons, Applicant respectfully submits that Harada et al. does not disclose first and second pivoting arms which are operative to traverse respective said tundish and said under-tundish from preheating stations to a casting station, as recited in Claim 1.

Moreover, there is no motivation to modify the Harada et al. casting plant such that the tundish of Harada et al. is traversed with pivoting arms based on a contention that Harada et al. teaches away from such modification or combination. In Harada et al., the ladle is traversed with a pivoting arm. Also, the tundish is traversed with a traveling truck. Traversing objects with a traveling truck is a slower compared to pivoting arms. Moreover, the objects being traversed are two different objects within the casting plant and have different replacement or maintenance times. The ladle is typically replenished frequently throughout the day. Accordingly, in Harada et al., the ladle which is traversed more frequently is traversed with pivoting arms such that

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Harada et al. teaches that operations performed frequently should be accomplished via faster methods (e.g., pivoting arms). Conversely, the tundish is replaced less frequently or seldomly compared to the ladle. Accordingly, the tundish is replaced via traveling trucks that travel on rails of a track such that Harada et al. teaches that operations performed less frequently or seldomly does not need to be accomplished as fast as possible but may be accomplished via slower methods (e.g., traveling truck). Accordingly, modifying the Harada et al. reference such that the tundish is traversed via a pivoting arm instead of a traveling truck would go against the teachings of Harada et al.

The difference between the casting plant of Harada et al. and the casting plant recited in Claim 1 is that the casting plant of Harada et al. is shut down for a longer period of time for maintenance compared to casting plant recited in Claim 1. The reason is that the time to replace or maintain the tundish of Harada et al. is longer compared to the time to replace or maintain the tundish of the invention recited in Claim 1 due to the different manner (i.e., traveling truck versus pivoting arm) in which the tundish is traversed, specifically, traveling truck in Harada et al. versus pivoting arms in the casting plant recited in Claim 1.

For the foregoing reasons, Claim 1 is believed to be in condition for allowance.

The dependent claims of Claim 1, namely, Claims 1-12 are believed to be in condition for allowance for containing additional patentable subject matter. For example, Claim 2 recites two turrets located adjacent to one side of the casting station, one tundish, one under tundish, one replacement tundish and one replacement under tundish, and the pivoting arms of the turrets are operative to traverse the replacement tundish and replacement undertundish from the preheating station to the casting station after the tundish and under tundish are removed for maintenance. The cited prior art does not disclose, suggest or make obvious such limitation, and thus Claim 2 as well as Claims 3-12 are in condition for allowance for containing additional patentable subject matter. The dependent claims of Claim 1, namely, Claims 2-12 are also believed to be in condition for allowance for being dependent upon an allowable base Claim 1.

Applicant acknowledges receipt of the prior art made of record and not relied upon, but considered by the Examiner to be pertinent to Applicant's disclosure. Applicant respectfully submits that cited prior art, either alone or in combination, does not anticipate, suggest or make obvious the instantly claimed invention.

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For the foregoing reasons, Applicant respectfully submits that all the stated grounds of rejection have been overcome, and that Claims 1-12 are in condition for allowance. An early notice of allowance is therefore respectfully requested.

Should the Examiner have any suggestions for expediting allowance of the application, the Examiner is invited to contact the Applicant's representative at the phone number listed below.

If any additional fee is required, please charge Deposit Account Number 19-4330.

Respectfully submitted,



Date: December 6, 2005

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